

(B) IN THE CLAIMS

1. (Original) An RF coil assembly, comprising:

an RF coil, and

a means for cooling the RF coil.

2. (Cancelled)

3. (Cancelled)

4. (Original) The RF coil assembly of claim 1 wherein the means

for cooling comprises:

a patient bore enclosure, and

a plurality of longitudinal cooling tubes attached to exterior of the patient bore enclosure.

5. (Original) The RF coil assembly of claim 1 wherein the means

for cooling comprises:

a patient bore enclosure, and

a continuous cooling tube attached to the patient bore enclosure, said cooling tube being wound in the general shape of a helix.

6. (Cancelled)

7. Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Original) A patient bore cooling assembly for an RF coil in a cylindrical MR system comprising:

a gradient coil winding of hollow cylindrical configuration,

an RF coil of hollow cylindrical configuration inside the gradient coil winding,

a generally cylindrical patient bore inside of the RF coil having an inside surface and an outside surface, and

a plurality of longitudinally spaced cooling tubes attached to the outside surface of the patient bore.

18. (Original) The patient bore cooling assembly of claim 17 further comprising:

a plurality of connecting tubes,

an intake manifold directing coolant from a connecting tube to the longitudinal tubes,

an exhaust manifold collecting coolant from the longitudinal tubes to a connecting tube,

a pump moving fluid through the circulatory connecting tubes, and

a heat exchanger cooling the fluid in the connecting tubes.

19. (Original) A patient bore cooling assembly for an RF coil in a cylindrical MR system comprising:

a gradient coil winding of hollow cylindrical configuration,
an RF coil of hollow cylindrical configuration inside the gradient coil winding,
a generally cylindrical patient bore inside of the RF coil having an inside surface and an outside surface, and
a cooling tube in a helical configuration attached to the outside surface of the patient bore.

20. (Original) The patient bore cooling assembly of claim 19 further comprising:

a plurality of connecting tubes,
a pump moving fluid through the circulatory connecting tubes, and
a heat exchanger cooling the fluid in the connecting tubes.

21. (Original) The patient bore cooling assembly of claim 20 further comprising:

a plurality of temperature sensors located within the patient bore assembly,
a computer electronically linked to said coolant pump and to said temperature sensors, said computer being programmed to increase coolant flow in the event of a rise in patient bore temperature and to decrease coolant flow in the event of a drop in coolant temperature.

22. (Cancelled)

23. (Cancelled)

24. (Original) In an open architecture MR imaging system, an RF coil assembly, comprising:

an RF coil, and

a patient bore enclosure, and

a plurality of cooling tubes attached to the patient bore enclosure.

25. (Original) The open architecture MR imaging system of claim 24 wherein a

plurality of cooling tubes are embedded within the RF coil.